

In the Claims

Please cancel claims 1-9 and 13 without prejudice or disclaimer.

Please add the following new claims.

22. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding an amino acid sequence identical to, except for up to five amino acid alterations per 100 amino acids, the amino acid sequence of SEQ ID NO:66.

23. (New) An isolated polynucleotide comprising the full complement of the nucleic acid sequence of claim 22.

24. (New) The isolated polynucleotide of claim 22 which encodes the amino acid sequence of SEQ ID NO:66.

25. (New) The isolated polynucleotide of claim 22 which further comprises a heterologous polynucleotide sequence.

26. (New) The isolated polynucleotide of claim 25, wherein said heterologous polynucleotide sequence encodes a polypeptide.

27. (New) A method of making a recombinant vector comprising inserting the isolated polynucleotide of claim 22 into a vector.

28. (New) A recombinant vector comprising the isolated polynucleotide of claim 22.

29. (New) The recombinant vector of claim 28, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

30. (New) A recombinant host cell comprising the isolated polynucleotide of claim 22.

31. (New) The recombinant host cell of claim 30, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

32. (New) A method for producing a polypeptide, comprising:

(a) culturing a recombinant host cell comprising the isolated polynucleotide of claim 22 under conditions suitable to produce a polypeptide encoded by said polynucleotide; and

(b) recovering the polypeptide.

33. (New) A polypeptide produced by the method of claim 32.

34. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding an epitope-bearing portion of the amino acid sequence of SEQ ID NO:66.

35. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding a portion of the amino acid sequence of SEQ ID NO:66 which specifically binds an antibody that specifically binds to a polypeptide consisting of the amino acid sequence of SEQ ID NO:66, wherein said portion comprises an amino acid sequence selected from the group consisting of:

- (a) Gly-11 to Arg-19;
- (b) Ile-23 to Lys-31;
- (c) His-145 to Asn-151;
- (d) Gln-159 to Asp-166;
- (e) Ile-175 to Asp-181;
- (f) Gly-213 to Tyr-225;
- (g) Ile-283 to Val-291;
- (h) Pro-329 to Glu-364;
- (i) Arg-372 to Ser-386;
- (j) Thr-421 to Phe-430;
- (k) Leu-445 to Val-453;

- (l) Ile-486 to Ala-497; and
(m) Asp-524 to Ala-535.

36. (New) The isolated polynucleotide of claim 35, wherein said amino acid sequence comprises (a) and (b).

37. (New) The isolated polynucleotide of claim 35, wherein said amino acid sequence comprises (l) and (m).

38. (New) The isolated polynucleotide of claim 35, wherein said amino acid sequence is (h).

39. (New) The isolated polynucleotide of claim 35, wherein said amino acid sequence is (i).

40. (New) The isolated polynucleotide of claim 35 which comprises a heterologous polynucleotide sequence.

41. (New) The isolated polynucleotide of claim 41, wherein said heterologous polynucleotide sequence encodes a polypeptide.

42. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 35 into a vector.

43. (New) A recombinant vector comprising the isolated polynucleotide of claim 35.

44. (New) The recombinant vector of claim 43, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

45. (New) A recombinant host cell comprising the isolated polynucleotide of claim 35.

46. (New) The recombinant host cell of claim 45, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

47. (New) A method for producing a polypeptide, comprising:

(a) culturing a recombinant cell comprising the isolated polynucleotide of claim 35 under conditions suitable to produce a polypeptide encoded by said polynucleotide; and

(b) recovering the polypeptide.

NE 48. (New) A polypeptide produced by the method of claim 47.

49. (New) An isolated polynucleotide comprising a nucleic acid sequence encoding at least 9 contiguous amino acid residues of SEQ ID NO:66.

50. (New) The isolated polynucleotide of claim 49 comprising a nucleic acid sequence encoding at least 30 contiguous amino acid residues of SEQ ID NO:66.

51. (New) The isolated polynucleotide of claim 50 comprising a nucleic acid sequence encoding at least 50 contiguous amino acid residues of SEQ ID NO:66.

52. (New) The isolated polynucleotide of claim 50 comprising a nucleic acid sequence encoding at least 100 contiguous amino acid residues of SEQ ID NO:66.

53. (New) The isolated polynucleotide of claim 50, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

54. (New) The isolated polynucleotide of claim 50, wherein said heterologous polynucleotide sequence encodes a polypeptide.

55. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 50 into a vector.

56. (New) A recombinant vector comprising the isolated polynucleotide of claim 50.

57. (New) The recombinant vector of claim 50, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

58. (New) A recombinant host cell comprising the isolated polynucleotide of claim 50.

59. (New) The recombinant host cell of claim 58, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

60. (New) A method for producing a polypeptide, comprising:

(a) culturing a recombinant cell comprising the isolated polynucleotide of claim 50 under conditions suitable to produce a polypeptide encoded by said polynucleotide; and

(b) recovering the polypeptide.

61. (New) A polypeptide produced by the method of claim 60.

62. (New) An isolated polynucleotide comprising a nucleic acid sequence which hybridizes at 42°C in 5X SSC and 50% formamide, to a nucleic acid sequence selected from the group consisting of:

(a) SEQ ID NO:65; and

(b) the full complement of (a).

63. (New) The isolated polynucleotide of claim 62, wherein said nucleic acid sequence is (a).

64. (New) The isolated polynucleotide of claim 62, wherein said nucleic acid sequence is (b).

65. (New) The isolated polynucleotide of claim 62, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

66. (New) The isolated polynucleotide of claim 65, wherein said heterologous polynucleotide sequence encodes a polypeptide.

67. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 62 into a vector.

68. (New) A recombinant vector comprising the isolated polynucleotide of claim 62.

69. (New) The recombinant vector of claim 68, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

70. (New) A recombinant host cell comprising the isolated polynucleotide of claim 62.

71. (New) The recombinant host cell of claim 70, wherein said polynucleotide is operably associated with a heterologous regulatory sequence that controls gene expression.

72. (New) A method for producing a polypeptide, comprising:

(a) culturing a recombinant cell comprising the isolated polynucleotide of claim 62 under conditions suitable to produce a polypeptide encoded by said polynucleotide; and

(b) recovering the polypeptide.

NE 73. (New) A polypeptide produced by the method of claim 72.

74. (New) An isolated polynucleotide comprising a nucleic acid molecule selected from the group consisting of:

- (a) SEQ ID NO:65; and
- (b) the full complement of (a).

75. (New) The isolated polynucleotide of claim 74 which comprises a heterologous polynucleotide sequence.

Sub B1 76. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 74 into a vector.

77. (New) A recombinant vector comprising the isolated polynucleotide of claim 74.

78. (New) A recombinant host cell comprising the isolated polynucleotide of claim 74.

79. (New) An isolated polynucleotide comprising a nucleic acid sequence identical to, except for up to five nucleotide alterations per 100, selected from the group consisting of:

- (a) SEQ ID NO:65; and
- (b) the full complement of (a).

80. (New) The isolated polynucleotide of claim 79, wherein said nucleic acid sequence is (a).

81. (New) The isolated polynucleotide of claim 79, wherein said nucleic acid sequence is (b).

82. (New) The isolated polynucleotide of claim 79, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

83. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 79 into a vector.

84. (New) A recombinant vector comprising the isolated polynucleotide of claim 79.

85. (New) A recombinant host cell comprising the isolated polynucleotide of claim 79.

86. (New) An isolated polynucleotide consisting of at least 100 contiguous nucleotides of a nucleic acid sequence selected from the group consisting of:

- (a) SEQ ID NO:65; and
- (b) the full complement of (a).

87. (New) The isolated polynucleotide of claim 86, wherein said nucleic acid sequence is (a).

88. (New) The isolated polynucleotide of claim 86, wherein said nucleic acid sequence is (b).

89. (New) The isolated polynucleotide of claim 86, wherein said polynucleotide comprises a heterologous polynucleotide sequence.

90. (New) A method for making a recombinant vector comprising inserting the isolated polynucleotide of claim 86 into a vector.

91. (New) A recombinant vector comprising the isolated polynucleotide of claim 86.